



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/989,662      | 11/21/2001  | Nahoko Takano        | Q67377              | 1776             |

7590 05/26/2005

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC  
2100 Pennsylvania Avenue, N.W.  
Washington, DC 20037-3213

EXAMINER

PHAM, TUAN

ART UNIT PAPER NUMBER

2643

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/989,662

Applicant(s)

TAKANO ET AL.

Examiner

TUAN A. PHAM

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 11 and 16-20 is/are rejected.
- 7) ☒ Claim(s) 2-5, 7-10, and 12-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/3/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 03/03/2005 has been considered by Examiner and made of record in the application file.

### ***Claim Objections***

3. Claim 18 is objected to because of the following informalities: the period should be placed at the end of the paragraph, not the comma. Appropriate correction is required.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**6. Claims 1, 6, 11, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonta et al. (U.S. Patent No.: 6,725,043, hereinafter, "Bonta") in view of Averbuch (U.S. Patent No.: 5,268,933).**

**Regarding claims 1 and 6**, Bonta teaches a mobile communication control method in which a mobile station transmits data using at least one currently transmitting base station and also sets a link with base stations forming an active set of base stations (see figure 1, mobile station 330, base stations 311, 312), comprising:

measuring a received signal quality of a pilot signal transmitted from each of the active set of base stations (see figure 1, mobile station 330, base stations 311, 312, col.5, ln.1-50),

determining at least one transmitting base stations from among the active set of base stations in accordance with the measured results (see col.5, ln.1-50), and

enabling for transmission all of the active set base station (see col.5, ln.1-50).

It should be noticed that Bonta fails to teach the determine all the transmission of all base stations based on the quality of communication from the currently transmitting base station. However, Averbuch teaches such features (see figure 1, base stations 130, 132, 133, 134, mobile 125, col.4, ln.15-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Averbuch into view Bonta, in order to improve the soft handoff as suggested by Bonta at column 1, line 38-46.

**Regarding claim 11**, Bonta teaches a mobile communication control method in which a mobile station transmits data using at least one currently transmitting base station and also sets a link with base stations forming an active set of base stations (see figure 1, mobile station 330, base stations 311, 312), comprising:

mean for measuring a received signal quality of a pilot signal transmitted from each of the active set of base stations (see figure 1, mobile station 330, base stations 311, 312, col.5, ln.1-50),

mean for determining at least one transmitting base stations from among the active set of base stations in accordance with the measured results (see col.5, ln.1-50), and

enabling for transmission all of the active set base station (see col.5, ln.1-50).

It should be noticed that Bonta fails to teach the determine all the transmission of all base stations based on the quality of communication from the currently transmitting base station. However, Averbuch teaches such features (see figure 1, base stations 130, 132, 133, 134, mobile 125, col.4, ln.15-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Averbuch into view Bonta, in order to improve the soft handoff as suggested by Bonta at column 1, line 38-46.

**Regarding claim 20**, Bonta teaches a mobile communication method comprising:

receiving by a mobile station pilot signals transmitted from a plurality of base station (see figure 1, mobile station 330, base stations 311, 312, col.5, ln.25-50);

forming a link between the mobile station and base stations from which the received pilot signal is above a predetermined threshold, thereby forming an active set of base stations (see col.5, ln.1-62), and

measuring signal quality of the pilot signal transmitted from each of said active set of base stations (see col.5, ln.1-62).

It should be noticed that Bonta fails to teach estimating state of transmission power value of a transmitting base station; and determining at least one new transmitting base station based on the measured result and the state of the transmission power value of the transmitting base station, wherein each base station from the active set of base stations becomes the at least one new transmitting base station depending on the transmission power value of the transmitting base station. However, Averbuch teaches such features (see figure 1, base stations 130, 132, 133, 134, mobile 125, col.4, ln.15-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Averbuch into view Bonta, in order to improve the soft handoff as suggested by Bonta at column 1, line 38-46.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bonta et al. (U.S. Patent No.: 6,725,043, hereinafter, "Bonta") in view of Averbuch (U.S. Patent No.: 5,268,933) as applied to claim 1 above, and further in view of Kumar et al. (U.S. Patent No.: 6,434,367, hereinafter, "Kumar").

Regarding claim 16, Bonta and Averbuch, in combination, fails to teach the mobile communication control, wherein each of the active set of base stations transmits a dedicated control signal to the mobile station and wherein only each of said at least one transmitting base station transmits dedicated data signal to the mobile station. However, Kumar teaches such features (see col.6, ln.10-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kumar into view Bonta and Averbuch, in order to avoid interference.

8. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonta et al. (U.S. Patent No.: 6,725,043, hereinafter, "Bonta") in view of Averbuch (U.S. Patent No.: 5,268,933) as applied to claim 1 above, and further in view of Willey (U.S. Patent No.: 5,854,785).

Regarding claim 17, Bonta and Averbuch, in combination, fails to teach the mobile communication control further comprising notifying the active set of base stations of the determined at least one transmitting base station. However, Willey teaches such features (see col.1, ln.50-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Willey into view Bonta and Averbuch, in order to prevent for dropping calls and poor calls signal as suggested by Willey at column 2, lines 55-60.

Regarding claims 18-19, Willey further teaches the mobile communication system, wherein said mobile station notifies the determined result to said active set base stations (see col.1, ln.55-60).

#### ***Allowable Subject Matter***

9. Claims 2-5, 7-10, and 12-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan A. Pham** whose telephone number is (571) 272-8097. The examiner can normally be reached on Monday through Friday, 8:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Curtis Kuntz can be reached on (571) 272-8097 and

**IF PAPER HAS BEEN MISSED FROM THIS OFFICIAL ACTION PACKAGE, PLEASE CALL Customer Service at (571) 272-2600 FOR THE SUBSTITUTIONS OR COPIES.**

Information regarding the status of an application may be obtained from the

Art Unit: 2643

Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have question on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit 2643

May 5, 2005

Examiner

Tuan Pham

  
CURTIS KUNTZ  
SUPERVISORY PATENT EXAMINER  
BIOLOGY CENTER 2600